IN THE CLAIMS:

Please amend claims 21 and 30, as shown in the complete list of claims that is presented below.

Claims 1-20 (cancelled).

21. (currently amended) A method for manufacturing a semiconductor device, in which a first semiconductor chip or substrate and a second semiconductor chip are joined to each other face-to-face via first bumps provided on electrode terminals or wiring of said first semiconductor chip or substrate and second bumps provided on said second semiconductor chip, comprising the steps of:

providing at least one of said first or second bumps with a tin layer, ~~having a thickness of about 0.1 to about 4 μm,~~ said at least one of said first or second bumps being made of gold and having a thickness of 10 μm to 30 μm;

superposing said first semiconductor chip or substrate and said second semiconductor chip without perfect alignment, such that one is on the other, and said first bumps face corresponding second bumps;

heating up said first semiconductor chip or substrate and said second semiconductor chip to a temperature at which said ~~low-melting point metal~~ tin layer melts, to thereby self-align said first semiconductor chip or substrate and said second chip and join them to each other via an Au-Sn alloy layer having a thickness of 0.8 μm to 5 μm; and

filling an insulating resin into a gap between said first semiconductor chip or substrate and said second semiconductor chip after they are joined, said insulating resin having a thermal shrinkage factor of 4% or less;

wherein one of said first bumps and corresponding second bumps is smaller in diameter than the other, and said first and corresponding second bumps are joined by heating such that a fillet is formed and covers at least part of a side wall of the smaller of said first and corresponding second bumps.

22. (previously presented) The method according to claim 21, wherein said heating up step comprises:

liquefying said tin layer to thereby diffuse gold of said first and corresponding second bumps into the liquefied tin, by the liquid-phase diffusion method, thus joining said first semiconductor chip or substrate and said second semiconductor chip to each other.

Claims 23-27 (cancelled).

28. (previously presented) The method according to claim 21, wherein said insulating resin and said first and second bumps have approximately the same elastic modulus.

29. (previously presented) The method according to claim 21, wherein said first and corresponding second bumps have ends that are substantially flat and that are oriented toward one another in said superposing step, the end of the smaller of said first and corresponding second bumps being smaller in area than the end of the larger of said first and corresponding second bumps.

30. (currently amended) A method for manufacturing a semiconductor device, in which a first semiconductor chip or substrate and a second semiconductor chip are joined to each other face-to-face via gold bumps provided on electrode terminals or wiring of the first semiconductor chip or substrate and gold bumps provided on the second semiconductor chip, each of the bumps provided on electrode terminals or wiring of the first semiconductor chip or substrate ~~including a first bump with a substantially flat end~~ and the bumps provided on the second semiconductor chip ~~including a second bump~~ having a substantially flat end, said method comprising the steps of:

providing a tin layer on a whole surface, including a surface of the flat end and a side face of each of the gold bumps, of at least one of the first semiconductor chip or substrate and second semiconductor chip, the ~~bumps with a~~ tin layer having a thickness of about 0.1 to about 4 μm and each of the gold bumps having a thickness of about 10 μm to about 30 μm;

superposing the first semiconductor chip or substrate and the second semiconductor chip without perfect alignment between the bumps thereof, the end of the first bump facing the end of the second bump;

heating the first semiconductor chip or substrate and the second semiconductor chip to a temperature at which the ~~metal having a lower melting point~~ tin layer melts, to thereby self-align the first semiconductor chip or substrate and the second semiconductor chip and join them to each other via Au-Sn alloy layers having a thickness of about 0.8 μm to about 5 μm and

filling an insulating resin into a gap between the first semiconductor chip or substrate and the second semiconductor chip after they are joined, the insulating resin having a thermal shrinkage factor of 4% or less,

wherein the end of one of the first and second bumps has an area smaller than the end of the other of the first and second bumps, and a fillet of the metal having a lower melting point forms during the heating step and covers at least part of a side wall of the first or second bump with the end having the smaller area.

31. (previously presented) The method according to claim 30, wherein the heating step comprises:

liquefying the tin to thereby diffuse gold of the first and second bumps into the tin.

Claims 32-33 (cancelled).

34. (previously presented) The method according to claim 33, wherein the insulating resin and the first and second bumps have approximately the same elastic modulus.